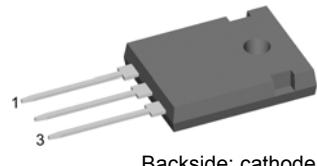
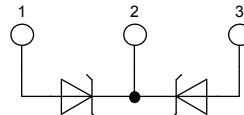


Schottky Diode

High Performance Schottky Diode
Low Loss and Soft Recovery
Common Cathode

Part number

DSA 50 C 150 HB



Backside: cathode

Features / Advantages:

- Very low V_f
- Extremely low switching losses
- low I_{rm} values
- Improved thermal behaviour
- High reliability circuit operation
- Low voltage peaks for reduced protection circuits
- Low noise switching

Applications:

- Rectifiers in switch mode power supplies (SMPS)
- Free wheeling diode in low voltage converters

Package:

- Housing: TO-247
- Industry standard outline
- Epoxy meets UL 94V-0
- RoHS compliant

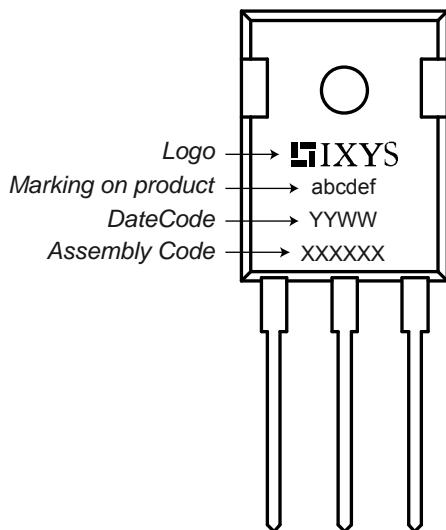
Symbol	Definition	Conditions	Ratings			
			min.	typ.	max.	Unit
V_{RRM}	max. repetitive reverse voltage	$T_{VJ} = 25^\circ\text{C}$			150	V
I_R	reverse current	$V_R = 150\text{V}$ $V_R = 150\text{V}$	$T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 125^\circ\text{C}$		0.5 5	μA mA
V_F	forward voltage	$I_F = 25\text{A}$ $I_F = 50\text{A}$ $I_F = 25\text{A}$ $I_F = 50\text{A}$	$T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 125^\circ\text{C}$		0.88 1.02 0.74 0.90	V
I_{FAV}	average forward current	rectangular, $d = 0.5$	$T_{C} = 155^\circ\text{C}$		25	A
V_{FO}	threshold voltage	$T_{VJ} = 175^\circ\text{C}$			0.53	V
r_F	slope resistance } for power loss calculation only				5.8	$\text{m}\Omega$
R_{thJC}	thermal resistance junction to case				0.95	K/W
T_{VJ}	virtual junction temperature		-55		175	$^\circ\text{C}$
P_{tot}	total power dissipation	$T_C = 25^\circ\text{C}$			160	W
I_{FSM}	max. forward surge current	$t = 10\text{ ms}$ (50 Hz), sine	$T_{VJ} = 45^\circ\text{C}$		200	A
C_J	junction capacitance	$V_R = \text{tbd V}$; $f = 1\text{ MHz}$	$T_{VJ} = 25^\circ\text{C}$	tbd		pF

Symbol	Definition	Conditions	Ratings			
			min.	typ.	max.	
I_{RMS}	<i>RMS current</i>	per pin ¹⁾			50	A
R_{thCH}	<i>thermal resistance case to heatsink</i>			0.25		K/W
T_{stg}	<i>storage temperature</i>		-55		150	°C
Weight				6		g
M_D	<i>mounting torque</i>		0.8		1.2	Nm
F_c	<i>mounting force with clip</i>		20		120	N

¹⁾ I_{RMS} is typically limited by: 1. pin-to-chip resistance; or by 2. current capability of the chip.

In case of 1, a common cathode/anode configuration and a non-isolated backside, the whole current capability can be used by connecting the backside.

Product Marking



Part number

D = Diode
 S = Schottky Diode
 A = low VF
 50 = Current Rating [A]
 150 = Reverse Voltage [V]
 HB = TO-247AD (3)

Ordering	Part Name	Marking on Product	Delivering Mode	Base Qty	Code Key
Standard	DSA 50 C 150 HB	DSA50C150HB	Tube		

Outlines TO-247

